

REMARKS

The Examiner has indicated that the claims included in the reply filed on 3/13/08 are not directed to the originally elected invention and requests that the applicant provide claims directed to an outer air seal assembly. The Examiner has also indicated that the above-mentioned reply appears to be a bona fide response; the applicant thanks the Examiner for such finding. The applicant has amended Claims 25-42 and has cancelled Claims 43-46. Claims 25-42 are pending in this application, and the text of the title has been restored to the original text.

Amended Claims 25-42 are directed to an outer air seal assembly constructed and arranged proximate to, but spaced radially away from, at least one turbine engine blade rotatably attached to a longitudinally extending shaft having a central axis, the blade being constructed and arranged to generate a flow of working fluid having a radially-outward component during operation, the seal assembly including at least first and second adjacent outer air seal segments constructed and arranged proximate to, but spaced radially away from, a radially-outward tip of said at least one blade, said seal segments being constructed and arranged to form an interface gap characterized by a radially-aligned portion and a radially-skewed portion, wherein said radially-skewed portion is formed by complementary, substantially-planar radially-inward portions of adjacent seal segments, wherein the radially-skewed portion of the interface gap is constructed and arranged to redirect the radially-outward component of the working fluid. Moreover, the first and second outer air seal segments are characterized by radially-outward boundary surfaces and opposite radially-inward boundary surfaces (each of said radially-inward boundary surfaces being radially spaced apart from said central axis by a predetermined first

distance), and the radially-outward component of said working fluid is directed toward said radially-inward boundary surfaces.

Unlike Anderson, the presently claimed first and second outer air seal segment provide an interface gap that is constructed and arranged to change direction of the radially-outward component of working fluid leaving the tip of the blade. Anderson does not disclose an outer air seal assembly having seal segments constructed and arranged proximate to, but spaced radially away from, a radially-outward tip of at least one blade constructed and arranged to generate a flow of working fluid having a radially-outward component directed toward radially-inward boundary surfaces spaced apart from the blade, with a seal assembly interface gap radially-skewed portion formed by complementary, substantially-planar radially-inward portions of said adjacent seal segments, which is constructed and arranged to change direction of the radially-outward component of working fluid leaving the tip of the blade. In fact, although Anderson discloses use of a blades, such use is as a blade platform joined with the blade – not as a seal member spaced apart from the blade, as in the claimed invention. Additionally, although Anderson discloses radially-skewed and radially-aligned portions, Anderson does not include a gap radially-skewed portion formed by complementary, substantially-planar radially-inward portions. Furthermore, although Anderson deals primarily with longitudinal flow between turbine blades, and not radial flow leaving turbine blades, even if radially-directed fluid would somehow flow through the Anderson interface gap, the so-called skewed portion of the Anderson gap, the skewed portion would not change the direction a radially-directed component of the fluid – the fluid would simply pass radially outward between the adjacent seal members – the Anderson seal members simply do not include complementary, substantially-planar, gap portions

that would interfere with radial flow or a working fluid. (See Figs. 4, 5, 6a, 6b, 6c, 13, and 14).  
Anderson simply does not teach or suggest the claimed invention.

Independent Claim 28 is directed to an outer air seal assembly including the feature of a substantially-uniform contour along the longitudinal span between seal member front boundary surfaces and said rear boundary surfaces. Anderson actually teaches away from such a uniform arrangement: Anderson allows interface gap contours to completely reverse orientation along the span between the seal member longitudinal front and rear; the Anderson gap contours can even reduce to zero in some sections. (See Col. 2, Lines 12-55 and Figs. 3, 7, and 8).

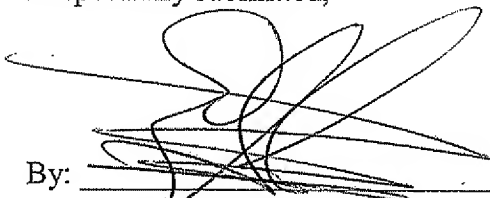
In view of the above, the Applicant respectfully submit that independent claim 25 is patentable. The Applicant further submits that dependent claims 26-42 are also patentable at least based on their dependency from their respective base claims, as well as based on their own merit. Therefore, Applicant respectfully requests that the Examiner pass these claims to allowance.

Conclusion:

Applicants respectfully request allowance of the present application in view of the foregoing amendments and arguments. The Commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Dated: 5/5/08

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